

Tenant's POS System Integration Specification

For External POS vendor integration

By Archer Logic (S) Pte Ltd

The information (data) contained in this document is furnished in confidence with the understanding that it will not, without written permission of Archer Logic (S) Pte Ltd, to be used or disclosed other than evaluation purposes; provided, however, that in the event a contract is awarded on the basis of this document, Archer Logic (S) Pte Ltd shall have the right to use or disclose this information to the extent allowed in the executed contract. This restriction limits the right of Archer (S) Logic Pte Ltd from using or disclosing this information if obtained from a third party without permission.

Versioning information

Ver.	Date	Remarks
1.0	01 Jul 2010	Created Document
1.1	01 Mar 2015	Updated company address

Introduction

This document details the requirements for external third party POS system to integrate with the Tenant's POS Integration System to transmit daily sales in text format through File Transfer Protocol (FTP). The Tenant's POS System Integration Specification shall be used by the tenant's IT team or POS vendor to carry out the necessary development and implementation according to the specifications.

Integration

The following options are available for the integration:

1. Option A: Tenants opting for Option A will need to connect their POS machine or PC to the LAN point provided within the store premises. A fixed IP address will be assigned by the mall personnel and the tenants should only use that IP address to connect to the LAN point. The LAN point will only be connected to the tenant integration system, and the tenant's POS system can FTP the required data file only over this LAN point.
2. Option B: This option is only available for tenants using POS systems that are centrally controlled from their head office. They will be submitting their sales data from their head office over the Internet via FTP.

For both options, the tenant's IT team or POS vendor should develop a function or program to automatically generate and transmit the daily sales transaction file to the integration server after the end of each business day (but before midnight). One file should be transmitted for each business day.

Provision must be made to allow for backlog processing of delayed or failed transmission (e.g. manual trigger)

If there is more than 1 POS terminal in the tenant's outlet, the sales of all POS must be consolidated into 1 file and be transmitted to the integration server.

Tenant should appoint a dedicated staff or their POS vendor to coordinate with the mall's integration project coordinator for the FTP of the daily transaction file in case of missing or corrupted files.

Daily Interface Operation

Tenants shall generate 1 daily transaction file in a text file format after every end of day closing and automatically send the data file to the integration server.

The user account and password to access the FTP server will be issued by the mall. For tenants transmitting via Option A, a fixed IP address will also be issued for use to connect to the mall's tenant LAN point.

The data file must be generated daily before midnight.

If the tenant's POS system is not able to send any daily transaction file successfully due to whatever reason, the tenant has to (manually, if necessary) send any backlog files to the integration server upon resolving the problem.

If the tenant's POS is not operational due to the technical problems and is not able to send any data, the tenant representative should update the mall's integration project manager immediately.

Interface Details

Tenants will be given their account and password to sign in to the integration FTP server.

Each tenant will be give a directory to put their files into, any they will only be allowed to access that folder using their ftp account. The directory will be the same as that of their FTP account.

They should upload the daily sales data file before midnight every day. They are only allowed to upload 1 file per day. Any subsequent file uploaded will overwrite the previous file.

The file generated must follow the file naming convention of "[account]_[YYYY][MM][DD].dat".

For example, if the tenant account is "myvillage" and they are submitting the file for 1st April 2010, then the file uploaded should be named "myvillage_20100401.dat".

The contents of the file should be comma separated (CSV), be all on 1 line with no spaces and newline characters, and should contain the following fields:

Field Num.	Type / Size	Field Name	Description
1	Character	Document header	Must contain "D"
2	Character	Account name	This is assigned by the management staff when they create the tenant's account.
3	Numeric	Date	The date this file is for. It must be in the format [YYYYMMDD] E.g. "20100401" for 1 st Apr 2010
4 - 27	Numeric	Hourly Sales 1	Sales amount, before discount and rounding, after service charge (if any), and before tax. There should be 24 values, one for each hour. Starting at 0 (12 midnight)
28	Numeric	Total Hourly Sales 1	The total sum of all hourly sales 1 values.
29 – 52	Numeric	Hourly Sales 2	Sales amount, after discount and rounding, after service charge (if any), and before tax. There should be 24 values, one for each hour. Starting at 0 (12 midnight)
53	Numeric	Total Hourly Sales 2	The total sum of all hourly sales 2 values.
54	Character	Check value	Check value to ensure that the values submitted are complete. This value is a 32 character string calculated using the MD5 algorithm on submitted string from the first character to the last character (including the last comma) before this check value. This value should be all in lower caps.

For example, if the tenant account is "myvillage" and they are submitting the sales for 1st Apr 2010.

Their file content would look like this (note that it should be in 1 long line):

```
D,myvillage,20100401,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,47.00,95.25,69.00,97.60,55.00,138.10,92.40,68.00,109.20,32.70,94.50,76.10,43.20,0.00,0.00,1018.05,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,42.00,90.25,64.00,92.60,50.00,133.10,88.40,63.00,104.20,28.70,89.50,71.10,38.20,0.00,0.00,953.05, da3651ec9ccd097b019f50863f7df370.
```